CLAIMS LISTING

1. (Currently Amended) An assembly for forming a high speed signal path between first and second daughter boards, ~~for conducting an electronic signal,~~ the assembly comprising:

a substrate having first and second surfaces;

a first daughter boards disposed proximate the first surface of the substrate;

a second daughter boards disposed proximate the first surface of the substrate;

first and second through-holes within the substrate, each through-hole having a first opening at the first surface and a second opening at the second surface;

a first conductive element disposed within the first through-hole and extending from the first surface to the second surface to form a first conductive via having first and second ends;

a second conductive element within the second through-hole and extending from the first surface to the second surface to form a second conductive via having first and second ends;

a first signal path electrically coupling the first daughter board to the first conductive element in the first through-hole;

a second signal path electrically coupling the second daughter board to the second conductive element in the second through hole;

an electronic cable having a first end and a second end, the first end of the electronic cable being inserted into the second~~first~~ end of the first conductive via and in electrical contact with the first conductive via, the second end of the electronic cable being inserted into the ~~first~~ second end of the second conductive via and in electrical contact with the second conductive via.

2. (Cancel)

3. (Withdrawn) The assembly of claim 2 further comprising a first conductive plating disposed about an interior surface of the substrate that defines the first through-hole and a second conductive plating disposed about an interior surface of the substrate that defines the second through-hole, and wherein the first electronic cable includes a first conductor having a first end disposed in electrical contact with the first conductive plating and a second end disposed in electrical contact with the second conductive plating.

4. (Withdrawn) The assembly of claim 3 wherein the first conductor is soldered to the first conductive plating.

5. (Withdrawn) The assembly of claim 3 wherein the first through-hole is filled with conductive material.

6. (Withdrawn) The assembly of claim 3 wherein the first through-hole is adapted to receive a conductive pin that extends from a circuit board connector of the first circuit board.

7. (Withdrawn) The assembly of claim 3 further comprising a conductive pin secured within the first through-hole and projecting out of the first through-hole to enable connection with a female connector of the first circuit board.

8. (Withdrawn) The assembly of claim 7 wherein the first and second-through holes extend between first and second parallel surfaces of the substrate, the conductive pin

projecting out of the first through-hole at the first surface, and the first end of the electronic cable entering the first-through hole at the second surface.

9. (Withdrawn) The assembly of claim 1 wherein the electronic cable comprises a coaxial cable having a center conductor and having an outer conductor disposed concentrically about the center conductor.

10. (Withdrawn) The assembly of claim 1 wherein the first electronic cable comprises:
a pair of wires that extend parallel to one another along the length of the first electronic cable;
an insulating material disposed about the pair of wires; and
a conductive shield disposed about the insulator.

11. (Withdrawn) The assembly of claim 1 wherein the first electronic cable comprises a twisted pair of insulated wires.

12. (Withdrawn) The assembly of claim 2 wherein the first and second regions each include a plurality of other through-holes, and wherein the assembly further comprises a plurality of other electronic cables extending from the first region to the second region, each of the plurality of other electronic cables having a first end disposed in a respective one of the other through-holes in the first region and a second end disposed in a respective one of the other through-holes in the second region.

13. (Withdrawn) The assembly of claim 11 wherein each of the plurality of other electronic cables comprises a coaxial cable.

14. (Withdrawn) The assembly of claim 11 wherein each of the plurality of other electronic cables comprises a pair of wires disposed within an insulator and a shield disposed about the insulator.

15. (Withdrawn) The assembly of claim 11 wherein each of the plurality of other electronic cables comprises a twisted pair of insulated wires.

16. (Withdrawn) The assembly of claim 1 wherein the first and second regions are disposed on a first planar surface of the substrate, and wherein the first electronic cable includes a first conductor that extends through the first through-hole to the first planar surface of the substrate.

17. (Withdrawn) The assembly of claim 16 wherein the first conductor comprises a first end disposed parallel to the first planar surface to receive a mating contact that extends from a circuit board connector of the first circuit board.

18. (Withdrawn) The assembly of claim 17 wherein the first conductor extends through the second through-hole and comprises a second end disposed parallel to the first planar surface to receive a mating contact that extends from a circuit board connector of the second circuit board.

19. (Withdrawn) The assembly of claim 17 wherein the first electronic cable further includes a second conductor that extends through the first through-hole to the first planar surface of the substrate, the second conductor having a second end disposed parallel to the first flat end.

20. (Withdrawn) The assembly of claim 17 wherein the first end is disposed substantially flush with the first planar surface.

21. (Withdrawn) The assembly of claim 17 wherein the first end has a substantially flat surface that is perpendicular to an axis of extension of the first conductor.

22. (Withdrawn) The assembly of claim 17 further comprising a dielectric disposed over the first end of the first conductor to establish a capacitive coupling between the first conductor and the mating contact that extends from the circuit board connector.

23. (Withdrawn) The assembly of claim 22 wherein the dielectric has a thickness and dielectric constant selected to achieve a desired capacitance between the first conductor and the mating contact that extends from the circuit board connector.

24. (Withdrawn) The assembly of claim 1 wherein the first and second regions are disposed on a first planar surface of the substrate, and wherein the first electronic cable includes a first conductor that extends within the first through-hole to a selected depth relative to the first planar surface.

25. (Withdrawn) The assembly of claim 1 wherein the first and second regions are disposed on a first planar surface of the substrate, and wherein the first electronic cable includes a first conductor that extends within the first through-hole and has a substantially flat end recessed relative to the first planar surface to receive a mating contact that extends into the first through-hole.

26. (Withdrawn) The assembly of claim 1 wherein the first and second regions are disposed on a first planar surface of the substrate, and wherein the first electronic cable includes a first conductor that extends through the first through-hole and projects out of the first through-hole at a first end, the first end being substantially flat end to receive a mating contact of a circuit board connector of the first circuit board.

27. (Withdrawn) The assembly of claim 1 wherein the substrate has conductive traces disposed thereon.

28. (Withdrawn) The assembly of claim 27 wherein the substrate comprises a plurality of layers including a first layer having an interior surface disposed in contact with an interior surface of another of the layers, and wherein at least a portion of the plurality of conductive traces are disposed on the interior surface of the first layer.

29. (Withdrawn) The assembly of claim 1 wherein the substrate comprises first, second and third component substrates, the first component substrate having first and second openings that define the first and second regions, respectively, and the second and third component substrates being disposed in the first and second openings, respectively, the first through-hole being disposed in the second component substrate and the second through-hole being disposed in the third component substrate.

Claims 30-83 (Cancelled)

84. (Previously Presented) The assembly of claim 1 wherein the electronic cable is selected from among a group of cables consisting of single conductor cables and dual-conductor

cables, and combinations thereof.

85. (Currently Amended) The assembly of claim ~~84~~ 1 wherein ~~a dual conductor~~ the electronic cable is a dual conductor cable selected from among a group of dual-conductor cables consisting of twin-axial cables, coaxial cables, twisted pair cables, and combinations thereof.

86. (Previously Presented) The assembly of claim 1 wherein the first end of the electronic cable is electrically coupled to the first via proximate the first opening of the first through-hole to mitigate signal reflection.

87. (Previously presented) The assembly of claim 85 wherein the dual conductor cable comprises a first conductor and a second ~~conductors~~ conductor that are equal in length from respective first ends to respective second ends.

88. (Previously presented) The assembly of claim 87 wherein the first ends of the first and second conductors of the dual conductor cable are cut perpendicular to their respective lengths.

89. (Previously presented) The assembly of claim 1 wherein the substrate comprises a plurality of layers.

90. (Previously presented) The assembly of claim 1 wherein the substrate comprises at least one conductive trace.

91. (Previously presented) The assembly of claim 90 wherein said at least one conductive trace includes a conductive trace coupled to ground potential.

92. (Previously presented) The assembly of claim 90 wherein said at least one conductive trace includes a conductive trace coupled to a source voltage.

93. (Previously Presented) The assembly of claim 1 wherein the first end of the electronic cable is secured within the first conductive via by a securing engagement selected from among a plurality of securing engagements consisting of solder, press fitted ends, frictionally secured ends, retaining hardware, and combinations thereof.

94. (Currently Amended) An assembly for forming a high speed signal path between first and second daughter boards, the assembly comprising:

a substrate having first and second surfaces;

a first daughter board disposed proximate the first surface of the substrate;

a second daughter board disposed proximate the first surface of the substrate;

first and second through-holes within the substrate, each through-hole having a first opening at the first surface and a second opening at the second surface;

a first conductive element disposed within the first through-hole and extending from the first surface to the second surface to form a first conductive via;

a second conductive element within the second through-hole and extending from the first surface to the second surface to form a second conductive via;

an electronic cable having a first and second ends, the first end of the electronic cable being

inserted into the ~~first~~ second end of the first through-hole and in electrical contact with the first conductive via, and the second end of the electronic cable inserted into the ~~first~~ second end of the second through-hole and in electrical contact with the second conductive via.~~;~~

~~a first electronic member coupled to the first conductive via; and~~

~~a second electronic member coupled to the second electronic via.~~

95. (Previously presented) The assembly of claim 94 wherein the first electronic member comprises a first daughter board having a conductive path conductively coupled to the first conductive via.

96. (Previously presented) The assembly of claim 95 further comprising a conductive pin having first and second ends, the first end of the conductive pin sized to fit into the second end of the first through-hole, and configured to electrically engage the first conductive via, and the second end of the pin conductively coupled to the first conductive path.

97. (Previously presented) The assembly of claim 96 wherein the daughter board further comprises a conductive engagement member for mechanically and electrically coupling the first conductive path to the conductive pin, the conductive engagement member having a distal end coupled to the first conductive path, and a proximal end having a mechanical capture to releasably engage to the second end of the conductive pin.

98. (Currently amended) The assembly of claim 95 further comprising an edge connector with parallel first and second sides, the edge connector being secured to the substrate,

wherein the first daughter board is fixably secured between the parallel first and second sides of the edge connector.